

NSLS OHSAS Job Risk Assessment

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Name(s) of Risk Team Members: N. Foster, N. Gmür, R. Greene, S. Hoblit	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Use of Unsealed Radioactive Materials and Radiation Generating Devices Job Number or Job Identifier: LS-JRA-0023	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Description: Use of unsealed radioactive material with the potential for spread of contamination, including: <ul style="list-style-type: none"> - Dispersibles - Unsealed sources - Accountable Nuclear Materials - Activated materials - Radiation Generating Devices 	Severity (C)	Rad stop work, RAR	ORPS threshold exceeded	NTS report filed with DOE	DOE enforcement action levied against BNL	DOE mandated rad ops stand down
Training and Procedure List (Optional):	Likelihood (D)	Extremely Unlikely <<1x/20yrs	Unlikely 1x/10-20yrs	Possible >1x/10-20yrs	Probable 1x/yr	Multiple >1x/yr
Approved by: W.R. Casey Date: 10/06/2005 Rev. #: 1 Revision Log						
Stressors (if applicable, please list all):		Reason for Revision (if applicable):			Comments:	

		Before Controls						After Initial Controls						After Additional Controls						
Job Step / Task	Hazard	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Initial Controls	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction

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Using dispersible radioactive materials	Radiation exposure	N	1	2	3	5	30	Training, dosimetry as required, postings, RWPs & Safety Approval Forms as needed, inventory, RADCON manual, RCT monitoring & assistance as needed	1	2	1	4	8							
	Radioactive contamination from dispersed materials	N	1	2	3	3	18	Area checks and frisks, proper clothing and coverings (PPE), RADCON manual, RWP and RCT assistance as needed	1	2	1	2	4							
Using unsealed sources, eg. foils, electrodeposited materials, sources with layers of containment such as Kapton tape	Radiation exposure	N	1	2	2	5	20	Training, dosimetry as required, postings, RWPs & Safety Approval Forms as needed, inventory, RADCON manual, RCT assistance as needed, proper labeling & storage	1	2	1	4	8							
	Radioactive contamination from a compromised source	N	1	2	2	3	12	Surface wipes as needed, PPE as needed, RADCON manual, RCT assistance as needed, proper labeling & storage	1	2	1	2	4							

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Transporting radioactive materials to another building on site	See LS-JRA-0039 for Vehicle Use See LS-JRA-0022 for Transporting Chemicals and Radioactive Materials																			
Working with Accountable Nuclear Materials	Radiation exposure	N	1	2	2	5	20	Training, dosimetry as required, review & inventory by I&SM, Material Balance Area defined & custodian appointed, proper storage & labeling	1	2	1	4	8							
	Radiation contamination from source	N	1	2	3	3	12	Training, review & inventory by I&SM, Material Balance Area defined & custodian appointed, proper storage & labeling, PPE as needed	1	2	1	2	4							
Working with activated materials, i.e. accelerator metal parts activated by the electron beam	Radiation exposure	N	1	2	2	5	20	Training, dosimetry as required, activation checks, RWP as needed, PPE as needed, work planning, proper labeling if stored	1	2	1	4	8							

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	Radiation contamination from source	N	1	2	2	3	12	Training, radiation surveys, RWP as needed, PPE as needed, work planning, proper labeling if stored	1	2	1	2	4							
Working with Radiation Generating Devices (RGD), i.e. X-ray generator in crystal cutting lab (535C)	Radiation exposure	N	1	2	2	5	20	Training, dosimetry as needed, custodian program, posting, procedures, inventory, interlocks, periodic radiation surveys & interlock tests, SBMS subject area	1	2	1	4	8							
Further Description of Controls Added to Reduce Risk:																				
*Risk:	0 to 20 Negligible	21 to 40 Acceptable						41 to 60 Moderate				61 to 80 Substantial				81 or greater Intolerable				